



## MEMORANDUM

**TO:** Chairman Kevin J. Martin  
Federal Communications Commission

**FROM:** Kristy McGrew  
Assistant to the CEO

**DATE:** May 7, 2007

**SUBJECT:** Rural Health Care Pilot Program Funding

We are pleased to present you with an application for funding through the Rural Health Care Pilot Program. The concept of telehealth is a new and exciting one for us and we are fortunate to be partnering with an agency that already has some experience in implementing this type of system. We have consulted with other Community Mental Health Centers in Kentucky who are using these services with great success to meet the needs of their clients. Given the challenges we face in recruiting and retaining qualified individuals, we believe that telehealth is a viable solution to our specific needs. We have enclosed a few letters of support from our elected officials to demonstrate the value of the services we provide. If you have any questions, please do not hesitate to contact me. Thank you for your consideration of our application.



RON LEWIS  
SECOND DISTRICT, KENTUCKY

COMMITTEE ON WAYS AND MEANS  
SUBCOMMITTEE ON SOCIAL SECURITY  
SUBCOMMITTEE ON TRADE

REPUBLICAN POLICY COMMITTEE  
PUBLICAN STUDY COMMITTEE  
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**House of Representatives**  
**Washington, DC 20515**

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1100 WALNUT STREET  
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OWENSBORO, KENTUCKY  
270-688-8858

TOLL FREE 1-800-36

Website: [www.house.gov](http://www.house.gov)

May 2, 2007

Mr. J.W. Osbourne  
Communicare  
107 Cranes Roost Ct.  
Elizabethtown, Kentucky 42701

Dear Bill:

I am pleased to learn of Communicare's intent to apply for funding from the Federal Communications Commission (FCC) to implement telehealth services in the eight counties of the Lincoln Trail District. The collaboration with Lincoln Trail District Health Department will result in increased and enhanced behavioral and physical health services for our neediest population. The two agencies are to be commended for their efforts to link these two systems through telehealth equipment.

Officials with the FCC are encouraged to give full and fair consideration, within all applicable laws and regulations, of this worthy project application. The implementation of this system would allow consumer access to these services to be greatly enhanced. In addition, the efficiencies that will be realized would certainly make a strong contribution to the viability of behavioral and public health services in our region. Thank you for your initiative!

Sincerely,

A handwritten signature in cursive script that reads "Ron Lewis".

RON LEWIS  
Member of Congress

RL:sld

**Commonwealth of Kentucky**  
HOUSE OF REPRESENTATIVES



**Jimmie Lee**  
901 DOGWOOD DRIVE  
ELIZABETHTOWN, KY 42701

FRANKFORT, KY 40601

**25th District**  
HARDIN COUNTY  
OFFICE (502) 765-82  
HOME (502) 737-88

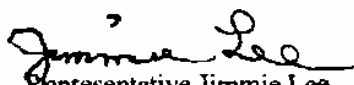
May 1, 2007

J. W. Osbourne  
Communicare, Inc.  
107 Cranes Roost Court  
Elizabethtown, KY 42701

Dear Bill:

I am pleased to offer my support of Communicare's intent to apply for funding from the FCC to implement telehealth services in the eight counties of the Lincoln Trail District. The collaboration with Lincoln Trail District Health Department will result in increased and enhanced behavioral and physical health services for our neediest population. Communicare and the Health Department both have positive reputations for providing quality programs and I am happy to hear that they are working together in order to increase access to their services. Thank you for all that you do for our residents.

Sincerely,

  
Representative Jimmie Lee  
House District 25



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**CABINET FOR HEALTH AND FAMILY SERVICES**  
**Department for Public Health**

**Ernie Fletcher**  
Governor

275 East Main Street, HS1GWA  
Frankfort, KY 40621  
(502) 564-3970  
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**Mark D. Birdwhistell**  
Secretary

May 4, 2007

Linda M. Sims, Director  
Lincoln Trail District Health Department  
108 New Glendale Road  
P.O. Box 2609  
Elizabethtown, Kentucky 42702-2609

Dear Ms. Sims:

I wish to offer my support for the grant application being submitted by Communicare, Inc. for a Communicare Telemental Health and Lincoln Trail District Health Department Telehealth network. I understand this grant will establish a partnership to interconnect a telemental/telehealth network in the counties served by these two entities. This network will be used to provide mental and public health services to the people, especially those in rural areas, within the region/district.

There are challenges in serving behavioral and preventative services in outlying counties due to distances and recruitment of providers. Time and travel costs contribute to escalating expenses in offering care especially among psychiatric prescribers. A telehealth network would create clinical and financial efficiencies that would enhance consumer access to much needed services.

I understand that the services offered by this linkage would offer timely behavioral health crisis consultation to Public Health clinics, provide case management consultation and intervention, offer the ability to screen for mental health and substance abuse disorders and subsequent referrals, address the provision of consultation and education services as well as the provision of disaster relief in the form of behavioral health intervention with victims of trauma and post traumatic stress.

I believe that this technology is an evolving opportunity that will increase access and services for those most in need and create faster intervention with improved outcomes.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. D. Hacker".

William D. Hacker, MD, FAAP, CPE  
Commissioner



## **1. Responsible Agency**

Communicare, Inc. is a regional Mental Health, Substance Abuse, and Mental Retardation/Developmental Disabilities Board serving eight counties in central Kentucky. We provide mental health, mental retardation and substance abuse services in Region 5, which is also the Lincoln Trail Area Development District. This region includes the central Kentucky counties of Hardin, Meade, Breckinridge, Grayson, Larue, Nelson, Marion, and Washington. Communicare's administrative offices are located Elizabethtown, which is in Hardin County. For purposes of this grant, the agency will assume legal and financial responsibility for the activities supported by the fund. The area served is largely rural, with only two counties not meeting the rural designation standard of the National Health Service Corps. The catchment includes 250,000 people, not including Fort Knox, which lies in the central hub county.

Challenges in serving the behavioral health needs of this citizenry have always included the recruitment and retention of psychiatric prescribers. This is due largely to the distance of our outlying clinics from not only our hub county, but also from the Louisville Metropolitan area in which the vast majority of our prescribers live. These distances also contribute to the huge costs associated with providing medical behavioral health services, notably mileage reimbursement and time spent traveling that significantly diminishes the treatment capacity of any particular clinic. In that regard, a telehealth network would create clinical and financial efficiencies that would certainly enhance consumer access to much-needed services.

Lincoln Trail District Health Department (LTDHD) is one of 17 Kentucky Health Department Districts. LTDHD provides clinical, home health, environmental, school health, and emergency preparedness/terrorism services across the Lincoln Trail District; which includes the counties of Grayson, Hardin, Nelson, Larue, Marion, Meade and Washington. LTDHD's administrative offices are also located Elizabethtown.

Communicare and public health leadership have long sought ways for our two agencies to collaborate in order provide services. Their system mirrors our own service area and faces similar inefficiencies associated with rural health service delivery. The reasons for a closer partnership are compelling. As the "safety net" for the region, we both serve a similar consumer base that includes Medicaid and Medicare recipients, as well as consumers without a payer source. Co-morbidities among the seriously mentally ill are well-documented; including, notably, diabetes and other systemic disorders. Similarly, people who present for chronic physical health problems have a high rate of behavioral health concerns. Frequently, these consumers are more comfortable presenting somatic concerns as opposed to mental health or substance abuse issues due to stigma concerns that escalate as rurality increases. The purpose of this joint project management plan is to establish an

interconnected telemental/telehealth network in the counties served by these two entities. This network will be used to provide mental and public health services to the people, especially those in rural areas, in the region/district.

The synergy of a telehealth system tying the two providers would be considerable. Linkages from Communicare's service sites with the seven public health sites would provide the following services and activities:

- Provide timely behavioral health crisis consultations to the Public Health Clinics
- Provide case management consultation and intervention
- Behavioral Health in-services designed to promote the ability to screen for mental health and substance abuse disorders and subsequent referrals
- Provision of consultation and education services to the behavioral health providers and particularly at-risk consumers for concomitant physical health issues. These would include "targeted" populations such as pregnant women, children with serious emotional disturbance, and the chronically mentally ill.
- Provision of disaster relief in the form of behavioral health intervention at local public health sites. Early intervention with victims of trauma and triage for services is essential in limiting the consequences associated with post-traumatic stress.

**Project Overview:**

Communicare will provide virtual presence communication-based videoconferencing and training services at ten (10) community mental health facilities throughout the region for people needing access to mental health services. Equipment funded by the Federal Communications Commission's (FCC's) Rural Healthcare Pilot Program will be located in existing client service buildings. Communicare's Mental Health Clinics, Crisis Units, Mental Retardation/Developmental Disabilities Directorate, and Administration facilities will be interconnected with each other on a region-wide broadband network with further interconnection capabilities to nine Lincoln Trail District Health Department facilities in seven of the Region's counties. Interconnection will be accomplished with a network of point-to-point T-1 lines with the main purpose of providing necessary bandwidth for video conferencing.

LTDHD will provide virtual presence communication-based videoconferencing and training services at eight public health facilities. Equipment funded by the Federal Communications Commission's (FCC's) Rural Healthcare Pilot Program will be located in existing client service buildings as follows: Grayson County Health Center, Hardin County Health Center – Elizabethtown, Hardin County Health Center – Radcliff, Meade County Health Center, Larue County Health Center, Nelson Country Health Center, Marion County Health Center, and Washington Country Health Center. LTDHD health centers will be interconnected with the Communicare facilities in the above paragraph through a point-to-point T-1 connecting both agency Administration facilities.



It is anticipated that the establishment of the network will be only the first step. In addition to the two regional agencies that will be part of the initial collaboration, there are several hospitals that could also be invited to join in at a later date.

**Communicare**  
Lincoln Trail Area Development District

LTADD in Kentucky

MEADE, HARDIN, NELSON, GRAYSON, WRECKINRIDGE, WASHINGTON, MARION, LARUE, SONORA, UPTON, LORETO, RAYWICK, BARDSTOWN, FAIRFIELD, BLOOMFIELD, WILLISBURG, MACKVILLS, SPRINGFIELD, LEBANON, BRADFORDSVILLE, CLARKSON, LEITCHFIELD, CANEYVILLE, IRVINGTON, EKRON, RADCLIFF, VINELAND, WEST POINT, BRANDENBURG, CLOVERPORT, HARDINSBURG, NEW HAVEN, HODGENSVILLE.

Communicare, Inc.  
1311 North Dixie Ave.  
Elizabethtown, KY 42701  
270.769.5301

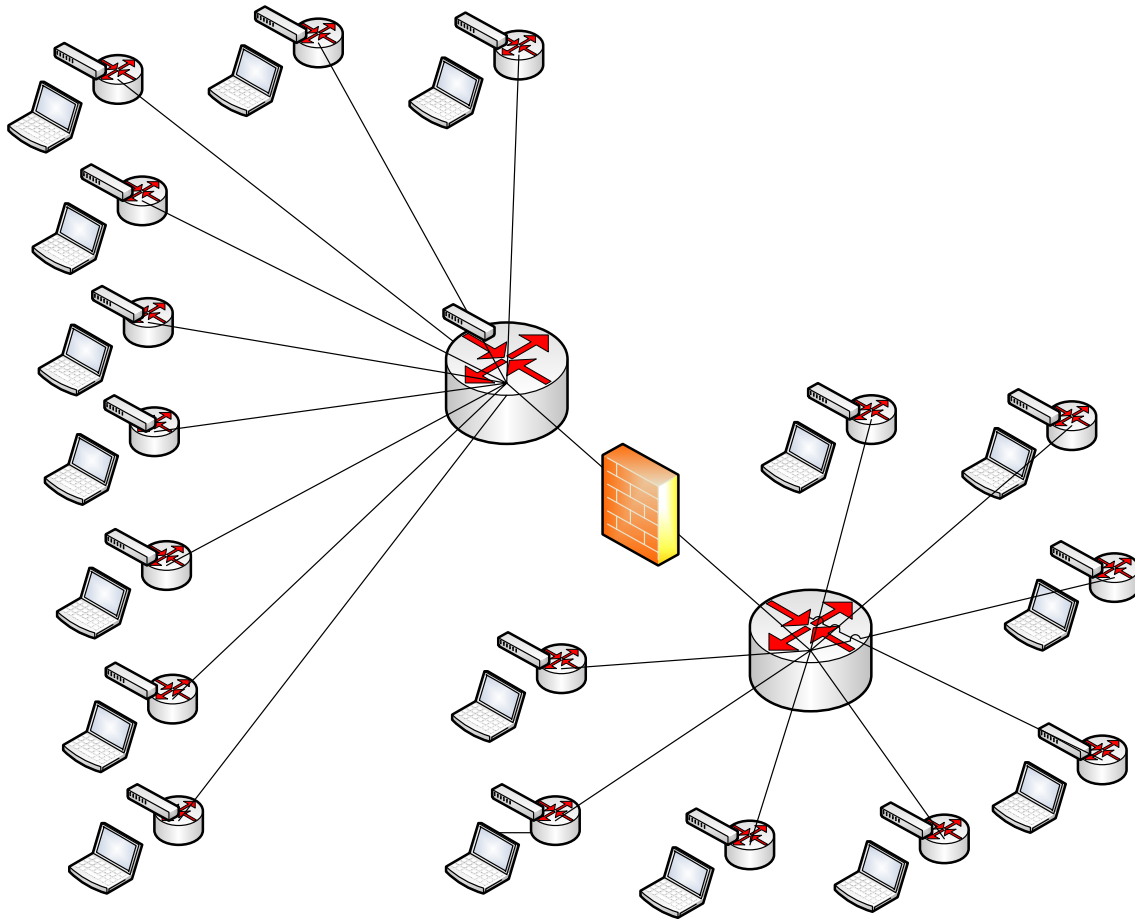
MAJOR HIGHWAYS  
Interstate  
Parkway  
US Route  
State Route  
Incorporated Cities  
County Boundary

Communicare Telemental Facilities  
LTDHD Telehealth Facilities

20 30 40 50 Miles

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Following is a connection diagram for the proposed Communicare Telemental Health and LTDHD Telehealth network. It shows the interface between end-point videoconferencing equipment on the community mental health facility and public health premises, each organization's internal router, and between each organization's networks.



## 2. Goals & Objectives

**Goal 1: To construct a regional broadband network encompassing our service area**

***Objective A:*** *To establish telehealth services throughout an eight-county region.*

**Goal 2: To improve access to quality medical services throughout the region**

***Objective A:*** *To increase by 10% the number of psychiatric services that are offered in 8 mental health clinic locations.*

***Objective B:*** *To increase by 10% the number of chronic disease management services that are offered throughout seven counties*

**Goal 3: To provide a variety of health services over the established network**

*Objective A: In conjunction with LTDHD, establish a target goal of 50 health services that are provided using the broadband network.*

**Goal 4: To establish a coordinated disaster response protocol in the region**

*Objective A: To enhance the disaster response system already offered by LTDHD to include telepsychiatry services.*

**Goal 5: To expand technological capabilities throughout the region**

*Objective A: Through the establishment of a regional network, include 2 additional health providers in the calendar year following the implementation within our own agency.*

### **3. Total Costs**

Anticipated costs for this project are outlined in the following information. The tables at the end of this section reflect budgetary figures. We expect that many of the reflected prices will be lower after the bidding and negotiation processes

**Network:**

This project's network will consist of two linked hub-and-spoke networks; one each for Communicare and LTDHD. Each organization will have a central site or hub to connect their community providers. The Communicare and LTDHD networks will be connected through a firewall that will limit data flow to video conferencing only.

Virtual consultations require a clear video image of the client so the service provider can interpret his/her subtle facial expressions and physical movements. Mental health providers must be able to differentiate facial expressions and to detect eye movements.

To accomplish this with at least 30 frames-per-second (fps), we believe that the constant range of 1.5 mega-bits-per-second (mbps) provided by point-to-point T-1 lines will be required to ensure necessary quality of transmissions.

**Video Conferencing Equipment:**

The types of videoconferencing equipment selected for use in the Region 5 Telemental Health / Public Health Network are:

- Notebook computers with Polycom PVX software and high resolution cameras (29 units).
- Polycom VSX 7000 systems or equivalents for medium group meetings and training (4 units).

- Polycom VSX 8000 system (1 ea) or equivalent for large group meetings and training (1unit).

**Equipment Management:**

Communicare and LTDHD will provide centralized management for all equipment at their respective sites. Each organization will have one spare notebook-based system so that an immediate replacement can be obtained in the event of a site's system malfunction. Malfunctioning units will be repaired or replaced as soon as possible

**Consultations:**

**NOTE:** Consultations are still in progress and will be ongoing to determine final equipment configurations.

Planning consultations occurred with users and technical staff at these sites:

- Bluegrass Regional Mental Health and Retardation Board, Inc.
- River Valley Behavioral Health.
- Lincoln Trail District Health Department.

Product vendor consultations occurred with sales, engineering, and technical personnel

at the following companies to investigate products, reliability, service response times, and pricing:

- Intertel: Polycom & Tandberg Dealer, Louisville, KY
- U.S. Voice & Data: Polycom Dealer, Louisville, KY
- CIS, Polycom & Tandberg Dealer, Corbin, KY
- Polycom Corporate, Chicago & Detroit
- Sony Corporate, Minneapolis
- Tandberg Corporate, Minneapolis, Washington, D.C., Boston

**Notebook based one-to-one video conferencing stations:**

Both Communicare and LTDHD have limited space to conduct telemental/telehealth activities, so mobility of stations for one-on-one interventions is critical. For this reason we have chosen notebook computer-based stations, which will allow easy relocation from office-to-office on a wireless network. Our plan calls for notebooks with 17" true-bright displays, loaded with Polycom PVX software. We will incorporate cameras that will auto focus and are adaptable to varying lighting conditions and color environments.

Computer-based stations will allow easy control of audio levels and muting to assure privacy/confidentiality. External speakers will be added if necessary to ensure adequate audio quality. Notebooks with Polycom PVX software have the capability to throughput up to 2 mbps. This concept has the added benefit of providing our medical staff with notebooks, which can also be used for email and other documentation purposes. Furthermore, we can experience high quality at a lower cost than with equipment that can be used solely for video conferencing.

These units will be located at the following Communicare facilities:

- Administration – spare
- Adult Crisis Stabilization Unit – 1 unit
- Regional MR/DD – 1 unit
- Elizabethtown Clinic – 5 units
- Radcliff Clinic – 2 units
- Bardstown Clinic – 2 units
- Lebanon Clinic – 2 units
- Hardinsburg Clinic – 2 units
- Leitchfield Clinic – 2 units
- Brandenburg Clinic – 1 unit

The units will be located at the following LTDHD facilities:

- Administration – spare
- Hardin County Health Center Elizabethtown – 1 unit
- Hardin County Health Center Radcliff – 1 unit
- Nelson County Health Center – 1 unit
- Marion County Health Center – 1 unit
- Grayson County Health Center – 1 unit
- Meade County Health Center – 1 unit
- Larue County Health Center – 1 unit
- Washington County Health Center – 1 unit

**Medium group video conferencing stations:**

Communicare plans on using Polycom VSX 7000 systems or equivalents in our Administration facility and rural locations that have conference or break rooms capable of holding medium group training or meetings.

Each system will be connected to a television display device that will be large enough for the planned audience and provide high video and audio quality. Sony 32 inch FD Trinitron WEGA Flat-Screen TV with SRS Audio Effect/Steady Sound (or equal) fits this criteria and its operation has been observed during consultation.

Capabilities of the telecommunications terminal equipment that will deliver services

include the following design and usability characteristics:

- Set-top design with suitability, versatility, and adaptability of design for installation with a variety of display sizes and types and for quick installation and de-installation.
- Easy user interface with remote control and software interface suitable for easy learning and use by both frequent and occasional users.
- High quality audio & video that is suitable for training, meetings, and to provide therapy and psychiatric consultations.
- Remote control and management for remote operational problem solving and maintenance.

- Ability to display meeting and data presentations (i.e. Polycom People+Content™).
- Meet International Union (ITU) standards for video conferencing.
- Bandwidth capabilities: IP up to 2 Mbps; ISDN up to 2 Mbps.
- Video frame rates: 30 fps.

These units will be located at the following Communicare facilities:

- Administration
- Breckinridge County Clinic
- Nelson County Clinic
- Marion County Clinic

**Large group video conferencing station:**

Communicare plans on using a Polycom VSX 8000 system, or equivalent, in our Regional Conference Center for trainings and large meetings. With a Multipoint Control Unit (MCU) that provides bridging capability, this type of system will allow for multipoint conference creation of up to six locations through our planned network including the option to display continuous presence of all participating locations. Display will be provided by a NEC LT 380 DLP projector or equivalent.

Capabilities of the telecommunications terminal equipment that will deliver services

include the following design and usability characteristics:

- Easy user interface with remote control and software interface suitable for easy learning and use by frequent and occasional users.
- High quality audio & video that is suitable for training, meetings, and to provide therapy and psychiatric consultations.
- Remote control and management for remote operational problem solving and maintenance.
- Ability to display meeting and data presentations (i.e. Polycom People+Content™).
- Multipoint Control Unit.
- Meet International Union (ITU) standards for video conferencing.
- Bandwidth capabilities: IP up to 2 Mbps; ISDN up to 2 Mbps.
- Video frame rates: 30 fps.

**Security:**

Network and equipment will provide encryption of transmission for compliance with Federal HIPAA requirements.

**Procurement:**

We would prefer using the procurement methods identified in the next three paragraphs. However, we will use any required procurement protocol required by the grantor.

Communicare is qualified for and currently receives special Kentucky Information Highway (KIH) pricing for long distance and T-1 services through AT&T. We would prefer using this source to obtain Communicare's T-1 lines for this project.

The LTDHD network is managed by the Commonwealth Office of Technology (COT) at the State level. Thus, they must obtain their T-1 lines and network equipment through that source.

Communicare and LTDHD will obtain at least three bids for the project's video conferencing equipment and notebook computers. Service agreements will be included for the Polycom VSX 5000, VSX 7000, and VSX 8000 equipment. Qualified equipment vendors of video conferencing equipment will need to be manufacturer-certified to provide installation and maintenance services with qualified personnel to assure prompt technical support to the field installations located throughout the region.

Our consultations are ongoing and we are currently evaluating and considering video conferencing equipment manufactured by Polycom, Tandberg, and Sony. We will also be open to consider other manufacturers as they become known.

If approved for this grant, we will develop an RFP for bid solicitations.

#### **Project Milestones/Schedule:**

We anticipate completion of project milestones within the following schedule:

- |                                                |   |                          |
|------------------------------------------------|---|--------------------------|
| ▪ Grant Formulation Submission                 | - | 05/07/07                 |
| ▪ Finalize product evaluations and publish RFP | - | Grant Approval + 30 days |
| ▪ Deadline for bid submissions                 | - | Grant Approval + 50 days |
| ▪ Choose all equipment and vendors             | - | Grant Approval + 60 days |
| ▪ Begin network and equipment install          | - | Grant Approval + 75 days |
| ▪ Operational network                          | - | Grant Approval + 90 days |



<b>Communicare Itemized Capital Equipment Budget</b>			
<b>Location</b>	<b>Equipment</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Administration - Hardin County	Nortel SR3120 8P Secure Router or equivalent (2)	\$3,866.19	\$7,732.38
Administration - Hardin County	Nortel SR3120 Secure Router or equivalent (2) Backup	\$3,012.53	\$6,025.06
Administration - Hardin County	Nortel Contivity 1010 Router Firewall (1)	\$874.13	\$874.13
Administration - Hardin County	Nortel Wall Mount Kit (2)	\$47.01	\$94.02
Administration - Hardin County	SR1002 AC Chassis (2)	\$1317.65	\$2635.30
Administration - Hardin County	Polycom VSX 7000 bundle w/P+C IP and VTX speaker phone or equivalent	\$10,000.00	\$10,000.00
Administration - Hardin County	Installation Service VSX 7000 bundle or equivalent	\$900.00	\$900.00
Administration - Hardin County	32" TV display	\$900.00	\$900.00
Administration - Hardin County	Cart	\$275.00	\$275.00
Administration - Hardin County	Notebook Computer (spare)	\$1,500.00	\$1,500.00
Administration - Hardin County	Polycom PVX SW (spare)	\$150.00	\$150.00
Administration - Hardin County	Camera (spare)	\$150.00	\$150.00
Adult Crisis Unit - Hardin County	Notebook Computer	\$1,500.00	\$1,500.00
Adult Crisis Unit - Hardin County	Polycom PVX SW	\$150.00	\$150.00
Adult Crisis Unit - Hardin County	Camera	\$150.00	\$150.00
Adult Crisis Unit - Hardin County	Nortel SR1002 Secure Router	\$1,930.00	\$1,930.00
Adult Crisis Unit - Hardin County	Wall Mount Kit	\$47.01	\$47.01

Adult Crisis Unit - Hardin County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Regional MR/DD - Hardin County	Notebook Computer (spare)	\$1,500.00	\$1,500.00
Regional MR/DD - Hardin County	Polycom PVX SW (spare)	\$150.00	\$150.00
Regional Conference Center - Hardin County	Polycom VSX 8000 bundle w/P+C and MCU or equivalent	\$19,000.00	\$19,000.00
Regional Conference Center - Hardin County	Installation Service for VSX 8000	\$1,350.00	\$1,350.00
Regional Conference Center - Hardin County	NEC LT 380 DLP projector or equal	\$2,200.00	\$2,200.00
Regional MR/DD - Hardin County	Nortel SR1002 Secure Router	\$1,930	\$1,930.00
Adult Crisis Unit - Hardin County	Wall Mount Kit	\$47.01	\$47.01
Regional MR/DD - Hardin County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Elizabethtown Clinic - Hardin County	Notebook Computers (5 units)	\$1,500.00	\$7,500.00
Elizabethtown Clinic - Hardin County	Polycom PVX SW (5 units)	\$150.00	\$750.00
Elizabethtown Clinic - Hardin County	Cameras (5 units)	\$150.00	\$750.00
Elizabethtown Clinic - Hardin County	Nortel SR1002 Secure Router	\$1,930.00	\$1,930.00
Elizabethtown Clinic - Hardin County	Wall Mount Kit	\$47.01	\$47.01
Elizabethtown Clinic - Hardin County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Radcliff Clinic - Hardin County	Notebook Computers (2 units)	\$1,500.00	\$3,000.00
Radcliff Clinic - Hardin County	Polycom PVX software (2 units)	\$150.00	\$300.00
Radcliff Clinic - Hardin County	Cameras (2 units)	\$150.00	\$300.00
Radcliff Clinic - Hardin County	Nortel SR1002 Secure Router	\$1,930.00	\$1,930.00
Radcliff Clinic - Hardin County	Wall Mount Kit	\$47.01	\$47.01
Radcliff Clinic - Hardin County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Bardstown Clinic - Nelson County	Notebook Computers (2 units)	\$1,500.00	\$3,000.00
Bardstown Clinic - Nelson County	Polycom PVX software (2 units)	\$150.00	\$300.00
Bardstown Clinic - Nelson County	Cameras (2 units)	\$150.00	\$300.00
Bardstown Clinic - Nelson County	Nortel SR1002 Secure Router	\$1,930.00	\$1,930.00
Bardstown Clinic - Nelson County	Wall Mount Kit	\$47.01	\$47.01
Bardstown Clinic - Nelson County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Bardstown Clinic - Nelson County	Polycom VSX 7000 bundle w/P+C IP and VTX speaker	\$10,000.00	\$10,000.00

	phone or equivalent		
Bardstown Clinic - Nelson County	Installation Service VSX 7000 bundle or equivalent	\$900.00	\$900.00
Bardstown Clinic - Nelson County	32" TV display	\$900.00	\$900.00
Bardstown Clinic - Nelson County	Cart	\$275.00	\$275.00
Bardstown Clinic - Nelson County	Nortel SR1002 Secure Router	\$1,930.00	\$1,930.00
Bardstown Clinic - Nelson County	Wall Mount Kit	\$47.01	\$47.01
Bardstown Clinic - Nelson County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Lebanon Clinic - Marion County	Notebook Computers (2 units)	\$1,500.00	\$3,000.00
Lebanon Clinic - Marion County	Polycom PVX software	\$150.00	\$300.00
Lebanon Clinic - Marion County	Cameras (2 units)	\$150.00	\$300.00
Lebanon Clinic - Marion County	Polycom VSX 7000 bundle w/P+C IP and VTX speaker phone or equivalent	\$10,000.00	\$10,000.00
Lebanon Clinic - Marion County	Installation Service VSX 7000 bundle or equivalent	\$900.00	\$900.00
Lebanon Clinic - Marion County	32" TV display	\$900.00	\$900.00
Lebanon Clinic - Marion County	Cart	\$275.00	\$275.00
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Lebanon Clinic - Marion County	Wall Mount Kit	\$47.01	\$47.01
Lebanon Clinic - Marion County	Nortel BES 110 Ethernet Switch	\$329.09	\$329.09
Hardinsburg Clinic - Breckinridge County	Notebook Computers (2 units)	\$1,500.00	\$3,000.00
Hardinsburg Clinic - Breckinridge County	Polycom PVX software (2 units)	\$150.00	\$300.00
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Leitchfield Clinic - Grayson County	Cameras (2 units)	\$150.00	\$300.00
Brandenburg Clinic - Meade County	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Brandenburg Clinic - Meade County	Polycom PVX SW (1 unit)	\$150.00	\$150.00
Brandenburg Clinic - Meade County	Camera (1 unit)	\$150.00	\$150.00

Installation for Region	Installation and configuration or routers and switches	\$9,790.00	\$9,790.00
TOTALS		<b>\$123,750.21</b>	<b>\$148,193.59</b>

<b>LTDHD Capital Equipment Budget</b>			
<b>Location</b>	<b>Equipment</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Lincoln Trail District Health Department Administration - Hardin County	Router (6)	\$1,623.00	\$9,738.00
Lincoln Trail District Health Department Administration - Hardin County	Notebook Computer (spare)	\$1,500.00	\$1,500.00
Lincoln Trail District Health Department Administration - Hardin County	Polycom PVX software (spare)	\$150.00	\$150.00
Lincoln Trail District Health Department Administration - Hardin County	Camera (spare)	\$150.00	\$150.00
Lincoln Trail District Health Department Administration - Hardin County	Dell Switch	\$1,148.00	\$1,148.00
Hardin County Health Center - Elizabethtown	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Hardin County Health Center - Elizabethtown	Polycom PVX software (1 unit)	\$150.00	\$150.00
Hardin County Health Center - Elizabethtown	Camera (1 unit)	\$150.00	\$150.00
Hardin County Health Center - Elizabethtown	Dell Switch	\$1,148.00	\$1,148.00
Nelson County Health Center - Bardstown	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Nelson County Health Center- Bardstown	Polycom PVX software (1 unit)	\$150.00	\$150.00
Nelson County Health Center- Bardstown	Camera (1 unit)	\$150.00	\$150.00
Nelson County Health Center- Bardstown	Dell Switch	\$1,148.00	\$1,148.00
Marion County Health Center - Lebanon	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Marion County Health Center- Lebanon	Polycom PVX software (1 unit)	\$150.00	\$150.00

Marion County Health Center- Lebanon	Camera (1 unit)	\$150.00	\$150.00
Marion County Health Center- Lebanon	Dell Switch	\$1,148.00	\$1,148.00
Washington County Health Center - Springfield	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Washington County Health Center- Springfield	Polycom PVX software (1 unit)	\$150.00	\$150.00
Washington County Health Center- Springfield	Camera (1 unit)	\$150.00	\$150.00
Washington County Health Center- Springfield	Dell Switch	\$1,148.00	\$1,148.00
Larue County Health Center - Hodgenville	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Larue County Health Center- Hodgenville	Polycom PVX software (1 unit)	\$150.00	\$150.00
Larue County Health Center- Hodgenville	Camera (1 unit)	\$150.00	\$150.00
Larue County Health Center- Hodgenville	Dell Switch	\$1,148.00	\$1,148.00
Grayson County Health Center - Leitchfield	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Grayson County Health Center- Leitchfield	Polycom PVX software (1 unit)	\$150.00	\$150.00
Grayson County Health Center- Leitchfield	Camera (1 unit)	\$150.00	\$150.00
Grayson County Health Center- Leitchfield	Dell Switch	\$1,148.00	\$1,148.00
Meade County Health Center - Brandenburg	Notebook Computer (1 unit)	\$1,500.00	\$1,500.00
Meade County Health Center- Brandenburg	Polycom PVX software (1 unit)	\$150.00	\$150.00
Meade County Health Center- Brandenburg	Camera (1 unit)	\$150.00	\$150.00
Meade County Health Center- Brandenburg	Dell Switch	\$1,148.00	\$1,148.00
Totals		<b>\$25,207.00</b>	<b>\$33,322.00</b>

<b>Communicare Recurring Monthly Cost Budget</b>			
<b>Location</b>	<b>Equipment</b>	<b>Monthly Cost</b>	<b>Annual Cost</b>
Elizabethtown Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Crisis Unit to Admin	Point-to-Point T-1	\$400.00	\$4,800.00

MR/DD to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Radcliff Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Bardstown Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Lebanon Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Hardinsburg Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Leitchfield Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Brandenburg Clinic to Admin	Point-to-Point T-1	\$400.00	\$4,800.00
Admin to LTDHD	Point-to-Point T-1	\$400.00	\$4,800.00
<b>TOTALS</b>		<b>\$4000.00</b>	<b>\$48,000.00</b>

LTDHD's recurring monthly cost is higher because their entire network is managed through the State by the Commonwealth Office of Technology in Frankfort and the cost includes a management fee.

<b>LTDHD Recurring Monthly Cost Budget</b>					
<b>Location</b>	<b>Equipment</b>	<b>Monthly Costs</b>			
		<b>T-1s</b>	<b>COT Management</b>	<b>Monthly Total</b>	<b>Annual Total</b>
Hardin County Health Center Elizabethtown to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Hardin County Health Center Radcliff to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Grayson County Health Center to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Meade County Health Center to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Larue County Health Center to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Nelson County Health Center to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Marion County Health Center to Admin	Point-to-Point T-1	\$447.00	\$480.00	\$927.00	\$11,124.00
Washington County	Point-to-Point	\$447.00	\$480.00	\$927.00	\$11,124.00

Health Center Clinic to Admin	T-1
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Total Annual Expense Region 5 Telehealth Project	
Communicare Capitol Expenses	\$148,193.59
LTDHD Capitol Expenses	\$33,322.00
Communicare Recurring Expenses Annual Total	\$48,000.00
LTDHD Recurring Expenses Annual Total	\$88,992.00
<b>Total</b>	<b>\$318,507.59</b>

Total Recurring Costs	\$7416.00	\$88,992.00
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The following are the minimum UA requirements for IP video conferencing equipment:

1. [H.323](#) version 2 compliant.
2. Video algorithm - [H.263](#).
3. Audio algorithm - [G.711](#).
4. Frame rate - 30 fps (frames per second).
5. Video format - [CIF](#).
6. Minimum data rate - 384 bps (bits per second).
7. [Static IP address](#) on a switched port network.

#### **4. For-Profit Participants**

For-profit network participants will pay any costs associated with their inclusion. The decision on how to fund this will be at their discretion and will likely vary from agency to agency.

#### **5. Non-funded Costs**

Due to decreased travel time and expenses, we fully anticipate additional funds that can be used to pay for costs not covered under the grant. In addition, medical staff should be able to see more patients with the implementation of telehealth services, which will result in additional revenue. This revenue will, in turn, be used to provide ongoing maintenance of the system, including, but not limited to, the monthly costs of the connections and equipment upgrades.

#### **6. – 7. Included Facilities and Contact Information**

Communicare, Inc.  
Administrative Offices  
107 Cranes Roost Court  
Elizabethtown, KY 42701  
(270) 765-2605

*Sites under this corporate umbrella would include:*

*Elizabethtown Clinic, Radcliff Clinic, Hardin County Adult Crisis Stabilization Unit, Harding County Therapeutic Rehabilitation Program (TRP), Bardstown Clinic, Bardstown TRP, Lebanon Clinic, Lebanon TRP, Leitchfield Clinic, Leitchfield TRP, Hardinsburg Clinic, and the Brandenburg Clinic*

Lincoln Trail District Health Department  
108 New Glendale Road  
PO Box 2609  
Elizabethtown, KY 42702-2609  
(270) 769-1601

*Sites under this umbrella would include:*

*Hardin County Clinic, LaRue County Clinic, Marion County Clinic, Meade County Clinic, Nelson County Clinic, Washington County Clinic, and the Grayson County Clinic*

*RUCA Codes for the counties under this service umbrella are as follows:*



- *Breckinridge - 8*
- *Grayson - 6*
- *Hardin - 3*
- *LaRue - 3*
- *Marion - 6*
- *Meade - 1*
- *Nelson - 1*
- *Washington - 8*

## **8. Previous Experience**

Communicare, Inc. has no previous experience with telehealth practices. We do, however, have an employee who has worked extensively with this type of system in the past. Lincoln Trail District Health Department has recently constructed a new regional facility which has telehealth capabilities that are currently limited in nature.

## **9. Project Management Plan**

For purposes of project management, two working groups, representing each organization have been formed. Decision making involving the overall project and integration of telemental and telehealth services between the two organizations will be accomplished through a joint working group. Project planning, organizing, directing, coordinating, and evaluating functions effecting internal decision making will be accomplished by each organization's project management team.

### **Working Group:**

Needs determination and project implementation will be accomplished by the Project Working Group, which consists of the following members:

#### **Communicare:**

- Bill Osbourne LCSW, Chief Executive Officer
- Dan Simpson BA, Director MRDD/Associate CEO
- Lance Heffer PsyD, Director-Mental Health Clinical Services
- Gary Campbell, Director- Operations
- John Lyon, Specialist – Information Technology
- Kristy McGrew MS, Assistant to the CEO

#### **Lincoln Trail District Health Department:**

- Linda Sims MSN, Director LTDHD
- Shelly Greenwell BSN, Director Diabetes Center of Excellence & Chronic Disease
- Glenda Bastin BSN, MS, Director of Nursing
- Stefanie Goff MSN, Clinical Director Hardin County Health Center

- Dave Johnson, Director Information Management Systems
- Jane Cornell, Director Clinical Administration

**Communicare – Internal Project Management:**

Overall management responsibility of Communicare's Region 5 Tele-Mental Health Network is the Director-Mental Health Clinical Services. Once operational, the Director will designate a person responsible for scheduling all activities across the network. This is necessary to ensure success, since multiple sites pose scheduling difficulties even in a dedicated mental health network.

Procurement and fielding of the network procurement and deployment of the Communicare network and equipment will be managed by the Director- Operations and Specialist – Information Technology

**LTDHD – Internal Project Management:**

Overall project management for Lincoln Trail District Health Department portion of the Region 5 Tele-Mental Health Network is the School Health Nursing Supervisor.

Procurement and fielding of the network procurement and deployment of the Lincoln Trail District Health Department network and equipment will be managed by the Information Manager/Systems Administrator.

**Telemental Health / Public Health Services:**

The Communicare and LTDHD Telemental and Health Network will have an enormous potential to provide a wide range of health services, provider education, and administrative functions. The range of mental health and public health services provided to rural consumers over the network would be virtually limitless and includes all of the same services that can be provided in-person.

**Mental Health:**

Possible mental health services include the following:

- Patient Evaluations
- Case Management
- Medication Management
- Crisis Response
- Treatment Planning
- Individual and Group Therapy
- Family Therapy
- Mental Status Evaluations
- Court Commitment Hearings
- Case Conferences
- Deaf and Hard-of-Hearing Services
- Disaster and Bioterrorism Interventions

- Staff Training
- Administrative Activities

**Public Health:**

Public health services could include:

- Health education
- Mental health assessments
- Disaster and Bioterrorism Interventions
- Mental health consultation for clients in the Health Department to include triage of needs for 1<sup>st</sup> response of pandemic events as well as to evaluate plan of care for crisis management on an individual basis.
- Medical consult for clients with the Medical Director for clients in each of the LTDHD Health Centers
- Live interactive training for both mental health professionals and medical professionals concerning identified needs of each entity with the convenience of having the training at your own facility
- Limited English Proficiency interpreters are provided while the consult is taking place to facilitate understanding and comprehension of all parties. With this equipment both the interpreter and the client are present for the session without the barrier of travel. These interpreters may also be made available to Communicare clients on an as-needed basis. The use of the equipment to provide this will result in valuable time savings and increase the efficiency of the services.

**10. Regional Coordination**

As outlined above, project management will be a joint effort between the working groups at each agency. Primary responsibility for regional coordination will be held by Communicare's Director of Mental Health/Clinical Services and LTDHD's School Health Nursing Supervisor. With the assistance of the working groups from each agency, these individuals will address any implementation issues that may arise and collaborate on a solution that is acceptable to both agencies. We are fortunate to have a long history of collaborating on projects, which has resulted in a close working relationship between the two agencies.

**11. Self-Sustainment**

Our medical providers bill at a rate of \$72 per unit of service, \$288 per hour. With the time and travel savings that should be realized from the implementation of a telehealth system, we can conservatively estimate an additional hour of service per day from each medical provider. Given our current staffing pattern of 5 medical doctors, this would result in an additional \$1,440 per day, \$10,080 per week, \$40,320 per month. These figures do not take into account the nursing staff that most likely will be able to provide some services with this equipment. Clearly, this

should generate enough income within Communicare for the system to sustain itself, once the initial investment is made. Lincoln Trail District Health Department should realize similar savings that will enable system maintenance once the funding cycle has ended.